

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008374**Date Inspected:** 06-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Fabrication**Summary of Items Observed:**

CWI Inspector: Mr. Sun Bo

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Trial Assembly Segments 1AE and 1BE

ZPMC issued "Inspection Notification Sheet" number 00085 informing QA that ZPMC will be performing torquing of bolts inside lower chevrons in OBG lift 3 East and lift 4 East starting at 1730 hours. At around 1730 hours ZPMC Representative Mr. Lei Tau informed this QA Inspector that ZPMC is going to perform torquing of bolts in lift 1AE and lift 1BE in accordance with notification 00081 instead of bolts in lifts 3 East and 4 East. ZPMC QC Inspector Mr. Shen Jian Bo informed this QA Inspector that he will be performing QC Inspections of the bolt torquing. Mr. Bo informed this QA Inspector that the bolts being tightened today are RC Set No. DHGM220033, size M22*65 and that due to having limited access to these bolts that ZPMC will be performing tensioning using turn of the nut technique. This QA Inspector performed random observations of ZPMC personnel performing turn of the nut final tensioning of the bolts at panel points PP8.5, PP9.0, PP9.5, PP10.0, PP11.0 and PP12.0. This QA Inspector observed ZPMC workers performing final bolt tightening of the 4 bolts securing angles inside the lower chevrons at both sides of each of the panel points listed above at the direction of ZPMC QC Mr. Shen Jian Bo using the turn of the nut method. This QA Inspector observed ZPMC workers initially

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performed tightening of the first bolt at location PP12.0 after match marking only one end of the bolts at location PP12.0. This QA Inspector informed Mr. Bo that the threaded fastener assembly needs to be match marked at both the nut end and bolt end in order to ensure proper tightness is obtained and that if the opposite end of the fastener turns that an unknown amount of tension will be obtained. Mr. Shen Jian Bo informed the workers that all fasteners need to be marked on each end of the assemblies prior to any turn of the nut tightening. ZPMC initially did not consistently perform initial match marking in a manner that clearly indicated the initial orientation of the nuts and at a few locations ZPMC did not fully attain a 180 degree rotation of the bolt as required by the specifications. When each of these problems were observed this QA Inspector informed ZPMC QC Mr. Shen Jian Bo who had the workers correct the problems. Following completion of the final tensioning of the bolts at panel points PP8.5, PP9.0 PP9.5, PP10.0, PP11.0 and PP12.0 ZPMC presented this QA Inspector with a “QA Approval Request Form (Bolting)” that documents that green tag number 195 has been issued for this work. This QA Inspector indicated lot number B254 on this document. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Liu Houkuan, stencil 045133 is using the shielded metal arc welding process to tack weld various stiffener splice welds between OBG segment 1AE and 1AAE. This QA Inspector observed a welding current of approximately 170 amps and the shielded metal arc welding electrodes are being stored in a portable heated container. This QA Inspector observed Mr. Liu Houkuan is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

See above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod phone: 134-8257-0045 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
